

# Use of Electronic Resources by Undergraduates in Selected Private University Libraries in South West Nigeria

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## Abstract

*The purpose of this study is to focus on the use of electronic resources by undergraduates in three private university libraries in South-west, Nigeria. It further seeks to examine the frequency of use of e-resources and problems encountered by undergraduates while using electronic resources. A survey research design was adopted for the study. The population of the study was 4,913 undergraduates of mission-owned private universities in South-west, Nigeria. A stratified sampling technique was used to draw a sample size of 370. Data was collected with a questionnaire. The findings showed that the majority of the respondents used e-resources to find relevant information in their area of studies; wrote term papers/did their assignments, and updated their knowledge. The findings also showed that e-resources were regularly used among undergraduates. The study concluded that poor connectivity and electricity failure constituted the major challenges to the use of e-resources among undergraduates. The study recommended that efforts should be made by universities and library management in the selected institutions to improve on the bandwidth and enhance the Internet connectivity.*

**Keyword:** E-resources, Use of e-resources, Undergraduates, Private Universities.

## Introduction

Electronic resources (also known as E-resources) are documents that are made available to users, in digital formats, through a computer-based information retrieval system (Sejane, 2017). Nwachukwu, Abdulsalami, and Salami (2014) submitted that the use of electronic resources is the extent to which users utilise the electronic resources to meet their information needs. The use of e-resources no doubt has numerous benefits for libraries as patrons can now retrieve information resources without restriction across the globe, which was practically impossible in the past. Therefore, academic libraries can go beyond the information resources present in the physical library to enable access to information in remote servers.

There are several benefits one stands to gain with the use of electronic resources. E-resources make it possible for users to access new tools and applications for information seeking and retrieval. They have become indispensable research devices that complement the print resources in the academic library. These resources serve as genuine sources of information that students could use to help their research writing, do their class assignments and term papers, search for information on their subject areas, and so on.

The sudden embrace of electronic resources in educational institutions is a result of the changes brought about by the advancement in information technology. These technologies have increasingly become commonplace in university libraries due to some factors characterising the educational environment today. In a university community where students are engaged in research activities, the provision of e-resources becomes essential because the resources contain frequently updated information.

Significantly, libraries play supporting roles in assisting universities in fulfilling their mandates of

teaching, learning, and research. Indeed, university libraries provide information resources in various formats to meet the information needs of the entire university community, most notably students. Jude-Iwuoha (2015) opined that the university library serves the academic community and its programmes range from the needs of diploma students, undergraduate students, postgraduate students, to those teaching and non-teaching staff.

Undergraduate students tend to be the most critical stakeholders in these citadels of learning. There would be no university without them. Indeed, undergraduates are young boys and girls who enrol for various programmes of studies in universities with high expectations. In this 21st Century, undergraduates are full of energy, highly curious, long to socialise, full of activities, and prefer the most accessible platform where their needs, including information needs, are met.

No matter how active undergraduates are, their primary purpose in university is for academic reasons. As such, there are many educational activities that any serious-minded undergraduates will engage in from time to time. These activities include but are not limited to assignments from lecturers with clear and specific instructions on the usage of a particular database available in the library. Completing online applications, online course registration, browsing through the library's Online Public Access Catalogue in search of a specific book in an automated library, and writing of project are other notable tasks that undergraduate students involve. Without any doubt, these activities will prompt undergraduates to visit libraries. Therefore, attempts by librarians to meet the information needs of their users, especially undergraduate students, necessitate the inclusion of electronic resources into libraries' collections.

There are various types of electronic resources for the usage of undergraduates in Nigerian universities. Some of these include electronic journals, electronic books, electronic magazines, electronic newspapers, Internet resources, CD-ROM, and e-databases like Ebscohost, AGORA, JSTOR, BioOne, National Virtual Library, Access to the online library of Thomason learning, Betham Journals, Emerald Journals, and a host of others.

Undergraduates need the use of electronic resources for quick access to information, provision

of better and faster access when compared with information accessed via print resources. Ukachi (2013) believed that electronic resources help to increase access, rate of use, and effectiveness and establish new ways for students to use the information to be more productive in their academic activities. In a related study, Negahban and Talawar (2009) submitted that electronic resources are the backbones of educational institutions. These scholars strongly believed that electronic resources serve as factors that motivate students, as they provide them with the opportunity to transmit, acquire or download, process and disseminate information on any subject of interest.

Electronic resources can also be accessed in the hostile, library, or at the classroom conveniently without any time barrier. The accessibility of e-resources is made possible via the online platform through networks, provided the user has access privileges in terms of the user's name and password. Indeed, e-resources play significant roles in libraries, most notably in academic libraries where they are used to promote research and academic excellence. Ukachi (2013) posited that the information needs of students and knowledge seekers are taken care of through different information sources, especially with electronic information resources dominating as a result of their ability to be accessed, even remotely.

However, literature has revealed that electronic resources are grossly under-utilised by undergraduates in Nigerian universities despite the potentials they hold for effective learning and research (Madondo, Sithole and Chisita, 2017; Margaret-Mary and Mabawonku, 2013). Indeed, literature has reported low use of electronic resources by undergraduates in university libraries (Adeniran, 2013; Ukachi, 2013). The impression is that many of the undergraduates are either unaware of the availability of electronic resources in their libraries or find some of the e-resources inaccessible. If private universities have invested a considerable amount of money in the subscription and maintenance of electronic resources, it will be fair enough on the part of users to fully utilise them.

The need to achieve greater utilisation of the electronic resources by undergraduates who constitute a significant percentage of the user community and are in the majority in most universities, makes it necessary to examine the effective and

efficient use of electronic resources. Based on the above-stated premise, the study investigated the use of electronic resources by undergraduates in three mission-owned private university libraries.

Therefore, this study was conducted as its findings would be of immense benefits to undergraduate students, university libraries, and librarians in the selected institutions. The findings of the study would help to improve usability of e-resources by students. The findings would also serve as a basis for justification to maintain constant renewal of subscription of e-resources by university libraries; help librarians to manage their limited funds and would also improve library service delivery.

### Objectives of the Study

The main objective of the study is to examine the use of electronic resources by undergraduates in selected private university libraries in South-west, Nigeria. The specific objectives of the study are to:

1. identify the purposes of the use of e-resource by undergraduates in the selected private universities;
2. examine the frequency of use of e-resource by undergraduates in the selected private institutions; and
3. identify challenges of using electronic resources by undergraduates in the selected private universities

### Research Questions

The following research questions were asked in the study:

1. What are the purposes of the use of e-resources by undergraduates in the selected private universities?
2. How frequently are e-resources being used by undergraduates in the selected private institutions?
3. What are the challenges of using electronic resources by undergraduates in the selected private universities?

### Literature Review

Urhiewhu and Omah (2016) investigated levels of electronic information resources usage among

undergraduate students in Taraba State University Library, Jalingo, Taraba State. Findings from the study revealed that the Internet via cybercafé was the major facility used to access electronic resources by undergraduate students of Taraba State University Library Jalingo, Taraba state. Fyneman, Idiedo and Ebhomeya (2014) researched the extent of use of electronic resources and the type of electronic resources used by undergraduates in universities in Nigeria. Engineering students from Rivers State University of Science and Technology and Niger Delta University, Bayelsa State. The findings of the work revealed that students from the two universities constantly made use of electronic resources. The findings also revealed that undergraduate students used electronic resources such as NUC virtual library, HINARI, E-journals, CD-ROMs, AGORA, and EbscoHost. However, the findings of the study showed that students were not very satisfied with the use of e-resources as a result of poor infrastructure and slow Internet connectivity. Based on the findings of the study, electronic resources were available, but accessibility was a challenge to the students. Owolabi, Idowu, Okocha, and Ogundare (2016) in a study on the utilisation of e-resources by a group of students of University of Ibadan, it was reported that e-resources like e-journals, e-mail services, Internet, e-databases, and cybercafés were available for the use of students in the said university and these resources were regularly used by them to support their research, online application/registration, communication with friends and colleagues, complete assignments, academic course works, sourcing for materials for project writing, and other personal purposes.

Madondo et al (2017) found out from a study on the use of electronic resources by undergraduate students of Africa University, Faculty of Management and Administration, Mutare, Zimbabwe that only three electronic databases: Emerald, Taylor and Francis, and Ebrary were frequently used by the undergraduates in the institutions they under-studied. The findings of the study also established that there was low usage of e-resources by undergraduate students from the same faculty due to socio and technical challenges. Based on the findings, the researchers discovered that students lacked adequate hands-on skills necessary to retrieve information from subscribed e-resources, hence low usage.

Omosekejimi, Eghworo and Ogo (2015) researched students of Federal University of Petroleum Resources (FUPRE), Effurun on the usage of e-resources. The objectives of the study were to find out the level of undergraduates' awareness of e-resources, ascertain the purpose of the use of e-resources and identify problems faced by students in the use of e-resources. The study found that all respondents were not unaware of the Internet with a 100% response rate in this university. The finding also revealed a high level of awareness for e-books (79.8%) and e-journals (62.2%) among undergraduates in FUPRE. Based on the findings, all respondents in this study used e-resources for assignments and to access e-mail while 98% of the respondents used e-resources for research purposes. From the finding of the study, the Internet was regularly used by the students. A study conducted by Tyagi (2012) on 160 users of IITK P.K. Library revealed that the users showed interest in the use of various databases like Science Direct, Web of Science, and a host of others for various purposes. Awareness among the users about the availability of online journals was found satisfactory. Online journals were mostly used for research needs, and PDF was the most preferred format. A research was conducted by Alhassan (2015) on undergraduates' utilisation of e-resources in two universities in Niger State, Nigeria showed that 89.23% of the respondents were fully aware of the existence of e-resources in their university libraries; with a great number of students (93.85%) that indicated usage for the resources. The findings also revealed that of all the available electronic resources, in the two universities, Internet services (97.69%), e-mail services (85.39%), and e-books (73.08%) were indicated to be used by respondents; whereas the use of CD-ROM, though available in the library, was not being patronised by students. Sixty-eight per cent of the total respondents from the two universities indicated the fact that they do not use CD-ROM. The findings of the study, further revealed that the majority of the respondents from the two universities used e-resources to source for materials for the project. Quadri, Adetimirin, and Idowu (2014) investigated the availability and

undergraduates' utilisation of e-resources through students from Babcock and Redeemer Universities. The findings of the study showed that the most readily available e-resource was the Internet with 83.5% and 92.8% response rates from both Babcock University and Redeemer's University, respectively. The findings also revealed that undergraduates from the two universities majorly used electronic resources for the writing of assignments and projects.

Adeniran (2013) examined undergraduates' usage of electronic resources at Redeemer's University. A sample of 256 students which comprises 200 to 400 level students was used. The findings also showed that majority of the students did use electronic resources available in the library regularly. The study also revealed writing of the assignment, research and information as some of the major purposes why undergraduates make use of e-resources.

In spite of the abundance of literature on the use of electronic resources in Nigerian universities, no comparative study has been carried out to centre on the use of electronic resources by undergraduates in mission-owned private universities in South-west, Nigeria. This gap so identified forms the crux on which this research work is anchored.

## Research Methodology

This study adopted the use of a survey design. The target population of the study consists of undergraduates in three selected mission-owned private universities that are ten years and above in South-west Nigeria. The justification for the selection of only three states (Ogun, Osun and Oyo) in the study is the fact that the researcher was interested in studying Arts, Social Sciences and Sciences based students in mission-owned private universities that were ten years and above. The selected institutions share these characteristics in common. For time constraint, the oldest university was selected in each of the South-west states, namely: Babcock University, Ilishan-Remo, Ogun State; Bowen University, Iwo, Osun State and Ajayi Crowther University Oyo, Oyo State. The study was carried out in 2020.

**Table 1: Mission Owned Private Universities that are ten years and above in South-west, Nigeria as of 2020**

S/N	University	Year of Establishment	Ownership
	<b>Ekiti State (0)</b>	None	-
	<b>Lagos State (0)</b>	None	-
	<b>Ogun State (4)</b>		-
1.*	Babcock University, Ilishan-Remo	1999	Seventh Day Adventist Church
2.	Covenant University, Ota	2002	Winners Chapel
3.	Crawford University, Igbesa	2005	Apostolic Faith Mission
4.	Crescent University, Abeokuta	2005	Islamic Mission for Africa
	<b>Ondo State (1)</b>		
5.	Wesley University of Science & Technology, Ondo	2007	Methodist Church, Nigeria
	<b>Osun State (4)</b>		
6.*	Bowen University, Iwo	2001	Nigerian Baptist Convention
7.	Fountain University, Osogbo	2007	NASFAT
8.	Joseph Ayo Babalola University, Ikeji-Arakeji	2006	Christ Apostolic Church
9.	Redeemer's University, Ede	2005	Redeemed Christian Church of God
	<b>Oyo State (1)</b>		
10.*	Ajayi Crowther University, Oyo	2005	Anglican Communion

**Source:** institution's website of each university. The oldest university is asterisked (\*) in each state.

**Table 2: Population and Sample Size**

S/N	University	Population	Sample Size
1	Babcock University	1840	139
2	Bowen University	1931	145
3.	Ajayi Crowther University	1142	86
	<b>Total</b>	<b>4913</b>	<b>370</b>

The total population of undergraduate students was 4913, which cut across the three (3) selected faculties; namely: Arts, Social Sciences and Sciences. These comprise Babcock University (BU) = 1840, Bowen University (BUI) = 1931, and Ajayi Crowther University (ACU) = 1142.

Babcock, Bowen and Ajayi Crowther Universities had eleven (11), sixteen (16) and ten (10) departments respectively in the selected faculties. Because the population is finite, Yamane formula was used to determine the sample size at 0.05 level of precision:

$$n = \frac{N}{1 + N(e)^2}$$

Where n = sample size

N = population

e = level of precision (Singh and Masuku, 2014).

The sample size for the total population of 4,913 is n = 370

Therefore, the sample size for the study is 370. A stratified sampling technique was used for this study. The method was used to draw the sample of each of the selected institutions proportionally, for a true representation.

Babcock University, for the selected faculties, is made up of eleven (11) departments altogether. These include Departments of History and International Studies, Languages and Literary Studies, Religious Studies, Music and Creative Arts, Economics, Mass Communication, Political Science and Public Administration, Social Work and Human Service, Agriculture and Industrial Technology, Basic Sciences, and Microbiology. Of these eleven departments: four (4) departments are from each of the Faculties of Arts and Social Sciences; while three (3) departments are from the Faculty of Sciences.

The sample size for Babcock University (BU) is 139. Therefore, one hundred and thirty-nine (139) students were selected across the three (3) faculties, from 100 to 400 level students in proportion to the number of departments that constitutes each of the faculties for fair. Thus, at Babcock University, 51 students were selected from each of the Faculties of Arts and Social Sciences and 37 students from the Faculty of Sciences.

On the other hand, Bowen University, for the selected faculties, is made up of sixteen (16) departments altogether. These include Departments of Communication and Performing Arts, English, History and International Studies, Philosophy and Religion, Economics, Industrial Relations and Personnel Management, Mass Communication, Political Science, Sociology, International Relations, Biological Sciences, Biochemistry, Chemistry and Industrial Chemistry, Computer Sciences and Information Technology, Mathematics and Statistics and Physical and Solar Energy. Of these sixteen departments: four (4) departments are from the

Faculty of Arts, and six (6) departments are from each of the Faculties of Social Sciences and Sciences.

The sample size for Bowen University (BUI) is 145. Therefore, one hundred and forty-five (145) students were selected across the three (3) faculties, from 100 to 400 level students in proportion to the number of departments that constitutes each of the faculties for fair representation. Thus, at Bowen University, 37 students were selected from the Faculty of Arts and 54 from each of the Faculties of Social Sciences and Sciences. Ajayi Crowther University, for the selected faculties, is made up of ten (10) departments altogether. These include Departments of English, Religious Studies, History and International Studies, Economics, Communication and Media, Biological Sciences, Chemical Sciences, Earth Sciences, Mathematical Sciences, and Physical Sciences. Of these ten departments: three (3) departments are from the Faculty of Arts, two (2) from the Faculty of Social Sciences and five (5) departments from the Faculty of Sciences. The sample size for Ajayi Crowther University (ACU) is 86. Therefore, eighty-six (86) students were selected across the three (3) faculties, from 100 to 400 level students in proportion to the number of departments that constitute each of the faculties for fair representation. Thus, at Ajayi Crowther University 26, 17, and 43 students were selected from Faculties of Arts, Social Sciences and Sciences respectively.

A questionnaire was adopted as an instrument for the collection of data for this study. The questionnaire was used to gather data from undergraduate students in the selected institutions. A set of questionnaire was developed and tagged as "Questionnaire on the Use of Electronic Resources by Undergraduates in selected Private University Libraries in South West, Nigeria". This was developed by the researcher following the research questions. Three hundred and seventy (370) copies of the questionnaire were administered to the respondents in their various departmental lecture rooms and library. The respondents were requested to fill and return the questionnaire immediately to ensure maximum response. Data collected were coded using Statistical Package for Social Sciences (IBM-SPSS) version 23.0 and the data were analysed using frequency count, percentage, tables, and bar chart.

**Results**

A total of 370 copies of the questionnaire were administered to undergraduates in Babcock University, Bowen University and Ajayi Crowther

University. A total of 347 participants responded and completed the survey questionnaire giving a response rate of 93.8%. Table 3 presents the data collection process.

**Table 3: Distribution of the Questionnaire, Response Rate and Percentage Used for Analysis**

S/N	Name of Institution	Questionnaire Administered	Valid Questionnaire Retrieved/ Used for the Analysis	Missing/Invalid Questionnaire
1.	Babcock University	139	131 (94.2%)	8 (5.8%)
2.	Bowen University	145	136 (93.8%)	9 (6.2%)
3.	Ajayi Crowther University	86	80 (93.0%)	6 (7.0%)
	<b>Total</b>	<b>370</b>	<b>347 (93.8%)</b>	<b>23 (6.2%)</b>

**Research Question 1:** What are the purposes of the use of e-resources by undergraduates in the selected private universities?

achieve this, ten possible purposes were highlighted. The results of the finding from undergraduates are presented in Table 4.

The researcher sought to ascertain the purpose of using electronic resources by undergraduates. To

**Table 4: Purpose for the Usage of Electronic Resources by Undergraduates**

I use e-resources for:	Yes		No	
	Freq.	%	Freq.	%
doing my assignment/term paper	334	96.3	13	3.7
writing my research (e.g. writing of project/long essay)	315	90.8	32	9.2
updating my knowledge	331	95.4	16	4.6
complementing classroom teaching	276	79.5	71	20.5
routing study	264	76.1	83	23.9
keeping up-to-date on information outside my specialization	280	80.7	67	19.3
assisting other students in search of vital information	258	74.4	89	25.6
prepare for a professional examination	256	73.8	91	26.2
finding relevant information in my area of study	337	97.1	10	2.9
locating books on the shelf in the library	175	50.4	172	49.6

N= 347

As shown in Table 4, the respondents' major purposes for using e-resources were: for finding relevant information in their area of studies (97.1%), doing their assignments/term papers (96.3%), updating their knowledge (95.4%), writing research, e.g. writing of project/long essay (90.8%), as well as keeping up-to-date information outside their specialization (80.7%). Moreover, other purposes for the respondents using electronic resources as revealed in the study included: for complementing classroom teaching (79.5%), routing study (76.1%), assisting other students in search of vital information (74.4%) and for preparing for professional examination (73.8%). However, 175 (50.4%) of the respondents indicated that they used e-resources for locating books on the shelf in the library. They

actually refer to the usage of the Online Public Access Catalogue (OPAC). It can, therefore, be deduced that undergraduates were really using electronic resources for academic purposes, although their usage of OPAC was on average (50.4%) based on the findings.

**Research Question 2:** How frequently are e-resources being used by undergraduates in the selected private institutions?

The frequency of use of e-resources by undergraduates in the selected private institutions was sought. The results of the findings are presented in Table 5.

**Table 5: Frequency of E-resources Usage by Undergraduates**

How often do you make use of e-resources		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Daily	127	36.6	36.6	36.6
	Few times a week	114	32.9	32.9	69.5
	Weekly	28	8.1	8.1	77.5
	Monthly	8	2.3	2.3	79.8
	Occasionally	70	20.2	20.2	100.0
	Total	347	100.0	100.0	

As revealed in Table 5, 127 (36.6%) of the respondents frequently made use of e-resources on a daily basis, 114 (32.9%) used e-resources for few times a week, 28 (8.1%) used them on a weekly basis, while 70 (20.2%) of the respondents made use of e-resources occasionally and 8 (2.3%) of the respondents used them once in a month. It can be deduced from the finding (as showed in Table 5), that below the average of the respondents, 127 (36.6%) frequently made use of e-resources.

**Research Question 3:** What are the challenges of using electronic resources by undergraduates in the selected private universities?

This section sought to identify the challenges faced by undergraduates while using e-resources.

Eight possible challenges were highlighted. The results of the findings from the undergraduates are presented in Figure 1.

Figure 1 shows that the most common challenge in the use of electronic resources identified by the respondents was poor connectivity (low Internet speed). A majority of the respondents 309 (89.0%) considered this as a challenge. This was followed by electricity failure 234 (67.4%), low coverage of available e-resources 202 (58.2%) and lack of well-organised home page of library 166 (47.8%). Next on the challenge confronted by undergraduates in the use of e-resources was the inadequate number of computer terminals 163 (47.0%). This was followed by a lack of assistance from librarian 154 (44.4%) and lack of Internet facilities 145 (41.8%).



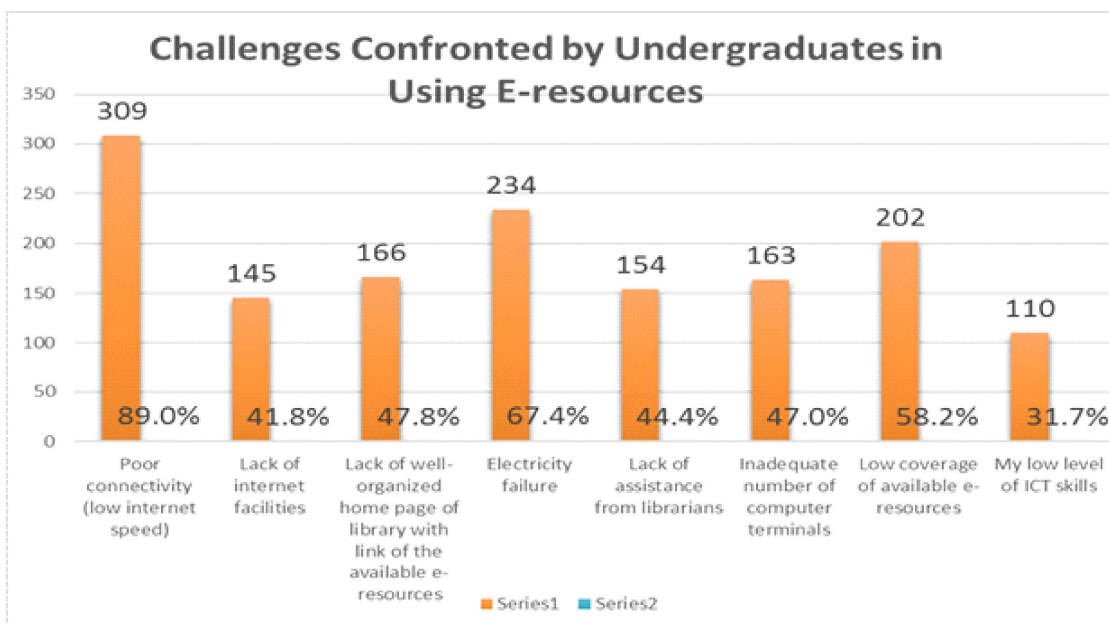


Figure 1: Challenges Confronted by Undergraduates in Using E-resources N=347

Most of the respondents did not consider the low level of ICT skills 110 (31.7%) as a challenge; this result attested to the finding on their ICT skills. It is obvious from the results that poor connectivity (low Internet speed) and electricity failure posed serious challenges to the use of electronic resources by the undergraduate students of the selected institutions, in South-west Nigeria. This is a reflection of the situation in Nigeria, which demands urgent attention.

## Discussion

On the purpose of using e-resources, finding relevant information in the students’ area of studies is the highest, followed by doing their assignment/ term papers, updating their knowledge and writing research, e.g. writing of the project. Keeping up-to-date on information outside their specialisation followed; next was for complementing classroom teaching, routine studies, assisting other students in search of vital information as well as for preparing for professional examination while locating books on the shelf in the library is the least reason for the usage of e-resources by undergraduates in selected private university libraries in South-west, Nigeria. This finding is in agreement with some past studies (Quadri et al., 2014; Alhassan, 2015; Omosekejimi

et al., 2015; Owolabi et al., 2016) that identified purposes of using e-resources by undergraduates to include: research writing, writing of assignment and sourcing materials for project writing. It can be deduced that the primary purpose behind the usage of e-resources by undergraduate students in the selected institutions is for academic purpose.

On the frequency of use of e-resources by undergraduates, the finding shows that majority of the undergraduate students in South-west, Nigeria frequently made use of e-resources. The finding suggests that e-resources usage is high among undergraduates. This finding concurs with the findings by Owolabi et al., 2016. That study reported that the majority of the undergraduate students regularly made use of e-resources. However, the finding differs from those of (Adeniran, 2013; Margaret-Mary and Mabawonku, 2013; Ukachi, 2013; Omosekejimi et al., 2015; Madondo et al., 2017) who reported low usage of e-resources among undergraduates.

On the challenges confronted by undergraduates in using electronic resources, the finding revealed the major challenges to include poor connectivity (low Internet speed), electricity failure and low coverage of available e-resources. This finding shows that the greatest challenge that the respondents faced within the use of electronic resources is poor connectivity (low Internet speed)

as indicated by 89.0% of the respondents. Electricity failure also poses a challenge to students' use of electronic resources as 67.4% of the respondents attested to this. These challenges can disrupt the use of e-resources and discourage students from learning through this platform, making them prefer using print resources. This is in support of the findings by Fyneman et al. (2014); Quadri et al. (2014); Omeluzor, Akibu and Akinwoye (2016); Owolabi et al. (2016); Fabunmi (2017) and Lavanya and Santharoban (2018) that poor Internet connectivity is a factor that affects access to and usage of electronic resources.

The finding on the challenges of using e-resources by undergraduates also agrees with the findings by (Emwanta and Nwalo, 2013; Bankole, Ajiboye and Otunla, 2015; Ugwu and Orsu, 2017; Toyo, 2017) who found out that unstable power supply constitutes a hindrance to the effective utilisation of e-resources. It is of note that students did not consider the low level of ICT skills as a challenge to the use of e-resources. This finding corroborates that of Toyo (2017).

The implications of the finding on the challenges facing students in using e-resources are that stable Internet connection, constant power supply, and adequate coverage of available e-resources are facilitating conditions that enhance the use of e-resources. So, when the problem of poor Internet connectivity continues, it could lead to under-utilisation of these resources, which would, in turn, affect students' learning and academic achievement. Efforts should be made by ownership of private universities, in South-west, Nigeria in tackling the problem of low Internet speed. Besides, electricity failure and low coverage of available resources would lead to under-utilisation of electronic resources.

This situation calls for the intervention of the university management in ensuring facilitating conditions for the use of technology and electronic resources by the students and the university community at large.

## Conclusion

While it is known by now that undergraduates in selected private universities in South-west Nigeria make use of electronic resources mainly for academic purpose on a regular basis. Poor Internet connectivity and epileptic power supply are said to be the major challenges confronting the usage of e-resources by undergraduates. Students need to be encouraged to maintain high patronage for the usage of e-resource. One of the ways to do this is by the university libraries to properly address the challenges that students are confronted with when using electronic resources.

University management, libraries and librarians must consider the future of undergraduates, not just their own interests, and do their possible best to encourage high usage of electronic resources by undergraduates by ensuring that the challenges identified are overcome..

## Recommendations

Based on the findings of this study and the conclusions which are drawn, the following recommendations are directed to university libraries, librarians in selected institutions, university management, and Federal government:

The study has revealed poor connectivity as the greatest challenge to the use of e-resources among undergraduates. Therefore, efforts should be made by university and library management in the selected institutions to improve the bandwidth and enhance the Internet connectivity. This will facilitate students' accessibility to e-resources.

- To solve the challenge of electricity failure as revealed in the study, university management in the selected institutions should introduce an independent power supply scheme so that there would be effective and unhindered use of e-resources.
- Similarly, the Federal Government of Nigeria can assist to tackle the problem of electricity failure in the nation by using solar energy to generate electricity.

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